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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 21T015812WO7	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/IT00/00380	International filing date (day/month/year) 27/09/2000	Priority date (day/month/year) 30/09/1999
International Patent Classification (IPC) or national classification and IPC C03C13/00		
Applicant TECHINT COMPAGNIA TECNICA INTERNAZIONALE S.P.A.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 9 sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"><li>I <input checked="" type="checkbox"/> Basis of the report</li><li>II <input type="checkbox"/> Priority</li><li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li><li>IV <input type="checkbox"/> Lack of unity of invention</li><li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li><li>VI <input type="checkbox"/> Certain documents cited</li><li>VII <input type="checkbox"/> Certain defects in the international application</li><li>VIII <input type="checkbox"/> Certain observations on the international application</li></ul>		
Date of submission of the demand 24/04/2001	Date of completion of this report 21.12.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Van Bommel, L Telephone No. +31 70 340 2747 	

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/IT00/00380

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
- Description, pages:**

2-14 as originally filed

1,1bis as received on 29/10/2001 with letter of 26/10/2001

### **Claims, No.:**

1-15 as received on 29/10/2001 with letter of 26/10/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IT00/00380

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-15
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-15
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-15
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**Re Item V**

**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

D2: WO-A-98 43923

D3: EP-A-0 588 251

D4: Glastechnische Berichte , DE, Verlag der Deutschen Glastechnischen Gesellschaft. Frankfurt (1991), 64(1), 16-28

D5: FR-A-2 781 788

Although all of D2 - D5 disclose biodegradable glass fibre compositions comprising SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, MgO, Na<sub>2</sub>O, K<sub>2</sub>O and B<sub>2</sub>O<sub>3</sub>, none of D2 - D5 teaches or fairly suggests the specific ranges for these oxides as claimed in claims 1 - 15 of the present application. The subject-matter of these claims is therefore considered new.

The compositions according to claims 1 - 15 solve the problem of providing glass fibre compositions with a good biosolubility and having good chemical, physical and mechanical properties (good humidity resistance, good workability, good heat and sound insulation properties, good elasticity and reduced brittleness) as well. This solution (the claimed compositional ranges) was not obvious having regard to the cited prior art documents. Therefore, the subject-matter of claims 1 - 15 is considered inventive.

- 1 -

A GLASS FIBER COMPOSITIOND e s c r i p t i o n

5 The present invention relates to a glass fiber composition. In particular, the present invention relates to a biologically-degradable or bio-soluble glass fiber composition, adapted for production of panels and felts of glass wool. These goods are commonly used in the civil  
10 and industrial field in the form of heat insulators and/or sound-proofing materials.

Presently known are many glass fiber compositions showing some biological degradability or bio-solubility  
15 (solubility of a glass fiber in contact with a biological liquid). It is in fact to be recognized that the biological degradability in glass fibers was in the past and has been till now the object of many studies because a relation seems to exist between this biological  
20 degradability and the cancerogenous properties that the glass fiber may show if it is introduced into or absorbed by a human or animal body.

[INSERT PAGE - 4bis -]

In particular, it has been recently ascertained that a  
25 higher bio-solubility can reduce the cancerogenous effects of the glass fibers increasing the capability of the human or animal body to get rid of the possibly-absorbed fibers.

30 In addition to bio-solubility, the glass fiber compositions of industrial concern must at all events also have an appropriate behaviour with reference to properties of physical, chemical and mechanical nature, such as for example: mechanical strength, elasticity,  
35 resistance to thermal fronts and chemical and atmospheric agents, workability, flexibility, fineness,

- 1 bis -

It is known from EP 1048625 a biosoluble fiber glass composition wherein  $\text{Al}_2\text{O}_3$  is present in a range varying from 1 to 3% in weight,  $\text{K}_2\text{O}$  is present in range varying from 0 to 3% in weight and at the same time  $\text{P}_2\text{O}_5$  and  $\text{SO}_3$  are not present. More in detail, in this prior art document, a reference composition named "C1" shows alumina at a 1.95% wt, potassium oxide at a 0.43% wt and sulphur oxide at a 0.32% wt; another composition retrievable in EP 1048625 (and named "C6") shows alumina at a 1.85% wt, potassium oxide at a 0.47% wt and no sulphur oxide.

Also known from WO 9843923 are some glass fiber compositions wherein silica ( $\text{SiO}_2$ ) is present in a range from 66 to 69.7 mol percent,  $\text{Al}_2\text{O}_3$  ranges from 0 to 2.2 mol percent, alkali metal oxides range from 7 to 18 mol percent, alkaline earth metal oxides range from 9 to 20 mol percent and  $\text{B}_2\text{O}_3$  ranges from 0 to 7.1 mol percent.

Patent nr EP 0588251 shows fiber glass compositions wherein  $\text{Al}_2\text{O}_3$  is present in a range varying from 0 to 2 mol percent and many other oxides are present ( $\text{CaO}$ ,  $\text{Na}_2\text{O}$ ,  $\text{ZrO}_2$  and  $\text{B}_2\text{O}_3$ ).

An extract from the publication "GLASTECHNISCHE BERICHTE, DE, VERLAG DER DEUTSCHEN GLASTECHNISCHEN GESELLSCHAFT" shows some fiber glass compositions, as well, each of them being characterized by specific ranges relative to the various chemical species.

Finally, it is known from FR 2781788 a fiber glass composition wherein  $\text{SiO}_2$  ranges from 54 to 70 weight percent,  $\text{Al}_2\text{O}_3$  ranges from 0 to 5 weight percent, monovalent oxides range from 4 to 15 weight percent, bivalent oxides range from 12 to 22 weight percent,  $\text{B}_2\text{O}_3$  ranges from 1 to 10 weight percent,  $\text{P}_2\text{O}_5$  ranges from 0 to 3 weight percent and some other chemical species are present in minor quantities.

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- 1 -

## MAIN REQUEST - CLAIMS

1. A biologically-degradable or bio-soluble glass fiber composition, characterized in that it comprises the following components expressed in percent by weight:
- $\text{SiO}_2$ : 61 to 66;
  - $\text{Al}_2\text{O}_3$ : 1.1 to 1.8;
  - $(\text{CaO}+\text{MgO})$ : higher than 9;
  - $(\text{Na}_2\text{O}+\text{K}_2\text{O})$ : higher than 18;
  - 10 -  $\text{B}_2\text{O}_3$ : 4 to 15;
  - $\text{P}_2\text{O}_5$ : 0 to 5;
  - $\text{SO}_3$ : 0 to 1;
  - $\text{Fe}_2\text{O}_3$ : 0 to 0.5;
  - Others: less than 2.
- 15 2. The composition as claimed in claim 1, characterized in that it comprises the following components expressed in percent by weight:
- $\text{SiO}_2$ : 61 to 66;
  - 20 -  $\text{Al}_2\text{O}_3$ : 1.1 to 1.8;
  - $\text{CaO}$ : 6 to 9;
  - $\text{MgO}$ : 0 to 5;
  - $(\text{Na}_2\text{O}+\text{K}_2\text{O})$ : higher than 18;
  - $\text{B}_2\text{O}_3$ : 4 to 15;
  - 25 -  $\text{P}_2\text{O}_5$ : 0 to 5;
  - $\text{SO}_3$ : 0 to 1;
  - $\text{Fe}_2\text{O}_3$ : 0 to 0.5;
  - Others: less than 2.
- 30 3. The composition as claimed in claim 1, characterized in that it comprises the following components expressed in percent by weight:
- $\text{SiO}_2$ : 61 to 66;
  - $\text{Al}_2\text{O}_3$ : 1.1 to 1.8;
  - 35 -  $(\text{CaO}+\text{MgO})$ : higher than 9;
  - $\text{Na}_2\text{O}$ : higher than 17.5, lower than or equal



- 2 -

- to 23;
- $K_2O$ : 0.6 to 2;
  - $B_2O_3$ : 4 to 15;
  - $P_2O_5$ : 0 to 5;
  - 5 -  $SO_3$ : 0 to 1;
  - $Fe_2O_3$ : 0 to 0.5;
  - Others: less than 2.

4. The composition as claimed in anyone of the preceding  
10 claims, characterized in that it comprises the following  
components expressed in percent by weight:

- $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.1 to 1.8;
- $CaO$ : 6 to 9;
- 15 -  $MgO$ : 0 to 5;
- $Na_2O$ : higher than 17.5, lower than or equal  
to 23;
- $K_2O$ : 0.6 to 2;
- $B_2O_3$ : 4 to 15;
- 20 -  $P_2O_5$ : 0 to 5;
- $SO_3$ : 0 to 1;
- $Fe_2O_3$ : 0 to 0.5;
- Others: less than 2.

25 5. The composition as claimed in claim 4, characterized  
in that it comprises the following components expressed  
in percent by weight:

- $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.1 to 1.8;
- 30 -  $(CaO+MgO)$ : higher than 9;
- $Na_2O$ : 17.50 to 18.50;
- $K_2O$ : 0.6 to 1;
- $B_2O_3$ : 5 to 15;
- $P_2O_5$ : 0 to 5;
- 35 -  $SO_3$ : 0 to 1;
- $Fe_2O_3$ : 0 to 0.5;

- 3 -

- Others: less than 2.

6. The composition as claimed in claim 5, characterized in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- Al<sub>2</sub>O<sub>3</sub>: 1.1 to 1.25;
- (CaO+MgO): higher than 9;
- Na<sub>2</sub>O: 17.50 to 18.50;
- 10 - K<sub>2</sub>O: 0.6 to 1;
- (B<sub>2</sub>O<sub>3</sub>+P<sub>2</sub>O<sub>5</sub>): higher than 5;
- SO<sub>3</sub>: 0 to 1;
- Fe<sub>2</sub>O<sub>3</sub>: 0 to 0.5;
- Others: less than 2.

15

7. The composition as claimed in claim 6, characterized in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- 20 - Al<sub>2</sub>O<sub>3</sub>: 1.1 to 1.25;
- (CaO+MgO): higher than 9;
- Na<sub>2</sub>O: 17.50 to 18.50;
- K<sub>2</sub>O: 0.6 to 1;
- B<sub>2</sub>O<sub>3</sub>: higher than 5;
- 25 - P<sub>2</sub>O<sub>5</sub>: 0 to less than 0.1;
- SO<sub>3</sub>: 0 to 1;
- Fe<sub>2</sub>O<sub>3</sub>: 0 to 0.5;
- Others: less than 2.

30 8. The composition as claimed in claim 7, characterized in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- Al<sub>2</sub>O<sub>3</sub>: 1.1 to 1.25;
- 35 - (CaO+MgO): higher than 9;
- Na<sub>2</sub>O: 17.50 to 18.50;

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- $K_2O$ : 0.6 to 1;
- $B_2O_3$ : higher than 5.5;
- $P_2O_5$ : 0 to less than 0.1;
- $SO_3$ : 0 to 1;
- 5 -  $Fe_2O_3$ : 0 to 0.5;
- Others: less than 2.

9. The composition as claimed in claim 6, characterized in that it comprises the following components expressed  
10 in percent by weight:

- $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.1 to 1.25;
- $(CaO+MgO)$ : higher than 9;
- $Na_2O$ : 17.50 to 18.50;
- 15 -  $K_2O$ : 0.6 to 1;
- $B_2O_3$ : less than 5;
- $P_2O_5$ : 0.75 to 1.5;
- $SO_3$ : 0 to 1;
- $Fe_2O_3$ : 0 to 0.5;
- 20 - Others: less than 2.

10. The composition as claimed in claim 9, characterized in that it comprises the following components expressed in percent by weight:

- 25 -  $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.1 to 1.25;
- $(CaO+MgO)$ : higher than 9;
- $Na_2O$ : 17.50 to 18.50;
- $K_2O$ : 0.6 to 1;
- 30 -  $B_2O_3$ : less than 4.5;
- $P_2O_5$ : 0.75 to 1.5;
- $SO_3$ : 0 to 1;
- $Fe_2O_3$ : 0 to 0.5;
- Others: less than 2.

35

11. The composition as claimed in claim 5, characterized

- 5 -

in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- Al<sub>2</sub>O<sub>3</sub>: 1.1 to 1.25;
- 5 - (CaO+MgO): higher than 9;
- Na<sub>2</sub>O: 17.50 to 18.50;
- K<sub>2</sub>O: 0.6 to 1;
- B<sub>2</sub>O<sub>3</sub>: 5 to 15;
- P<sub>2</sub>O<sub>5</sub>: 0 to 5;
- 10 - SO<sub>3</sub>: 0.1 to 0,5;
- Fe<sub>2</sub>O<sub>3</sub>: 0 to 0.5;
- Others: less than 2.

12. The composition as claimed in claim 5, characterized in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- Al<sub>2</sub>O<sub>3</sub>: 1.1 to 1.25;
- (CaO+MgO): higher than 9;
- 20 - Na<sub>2</sub>O: 17.50 to 18.50;
- K<sub>2</sub>O: 0.6 to 1;
- B<sub>2</sub>O<sub>3</sub>: 5 to 15;
- P<sub>2</sub>O<sub>5</sub>: 0 to 5;
- SO<sub>3</sub>: 0 to 1;
- 25 - Fe<sub>2</sub>O<sub>3</sub>: 0.05 to 0.2;
- Others: less than 2.

13. The composition as claimed in claim 5, characterized in that it comprises the following components expressed in percent by weight:

- SiO<sub>2</sub>: 61 to 66;
- Al<sub>2</sub>O<sub>3</sub>: 1.6 to 1.8;
- (CaO+MgO): higher than 9;
- MgO: higher than 3;
- 35 - MgO: preferably higher than 3.50;
- Na<sub>2</sub>O: 17.50 to 18.50;

- 6 -

- $K_2O$ : 0.6 to 1.5;
- $B_2O_3$ : 5 to 15;
- $P_2O_5$ : less than 0.1;
- $SO_3$ : less than 0.35;
- 5 -  $Fe_2O_3$ : higher than zero;
- Others: less than 2.

14. The composition as claimed in claim 5, characterized in that it comprises the following components expressed  
10 in percent by weight:

- $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.6 to 1.8;
- $(CaO+MgO)$ : higher than 9;
- $(Na_2O+K_2O)$ : higher than or equal to 18.5 and  
15 lower than or equal to 23;
- $K_2O$ : 0.6 to 1.5;
- $B_2O_3$ : 5 to 15;
- $P_2O_5$ : less than 0.1;
- $SO_3$ : 0.1 to 0.25;
- 20 -  $Fe_2O_3$ : higher than 0;
- Others: less than 2.

15. The composition as claimed in claim 5, characterized in that it comprises the following components expressed  
25 in percent by weight:

- $SiO_2$ : 61 to 66;
- $Al_2O_3$ : 1.6 to 1.8;
- $(CaO+MgO)$ : higher than 9;
- $MgO$ : higher than 3;
- 30 -  $MgO$ : preferably higher than 3.50;
- $(Na_2O+K_2O)$ : higher than or equal to 18.5 and  
lower than or equal to 23;
- $K_2O$ : 0.6 to 1.5;
- $B_2O_3$ : 5 to 15;
- 35 -  $P_2O_5$ : less than 0.1;
- $SO_3$ : 0.1 to 0.25;

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- $\text{Fe}_2\text{O}_3$ : higher than 0;
- Others: less than 2.

## PATENT COOPERATION TREATY

10/089586

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

GHIONI Carlo Raoul  
Bugnion S.p.A.  
Viale Lancetti, 17  
I-20158 Milano  
Italy

RECEIVED  
MAY 02 2003  
GROUP 1700

Date of mailing (day/month/year) 18 décembre 2002 (18.12.02)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 21T015812WO7	
International application No. PCT/IT00/00380	International filing date (day/month/year) 27 septembre 2000 (27.09.00)

## 1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

## Name and Address

POLIGLAS S.A.  
Ctra. de Barcelona Km., 66  
Barbera del Valles  
Barcelona  
Spain

## State of Nationality

ES

## State of Residence

ES

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☐ the address ☐ the nationality ☐ the residence

## Name and Address

TECHINT COMPAGNIA TECNICA  
INTERNAZIONALE S.P.A.  
Via Monterosa, 93  
20149 Milano  
Italy

## State of Nationality

ES

## State of Residence

ES

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

**Following an assignment, please note that the applicant in box 1 is applicant for all designated states except the US and AU whereas the applicant in box 2 remains applicant for all designated states except the US.**

## 4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☐ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Dorothee MÜLHAUSEN (Fax : 338 89 75)

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

GHIONI Carlo Raoul  
Bugnion S.p.A.  
Viale Lancetti, 17  
I-20158 Milano  
ITALIE

Date of mailing (day/month/year) 09 July 2001 (09.07.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference 21T015812WO7	
International application No. PCT/IT00/00380	International filing date (day/month/year) 27 September 2000 (27.09.00)

1. The following indications appeared on record concerning:	
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor <input checked="" type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address SUTTO, Luca Bugnion S.p.A. Viale Lancetti, 17 I-20158 Milano Italy	State of Nationality
	State of Residence
	Telephone No. 02/693031
	Facsimile No. 02/69303501
Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:	
<input type="checkbox"/> the person <input checked="" type="checkbox"/> the name <input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence	
Name and Address GHIONI Carlo Raoul Bugnion S.p.A. Viale Lancetti, 17 I-20158 Milano Italy	State of Nationality
	State of Residence
	Telephone No. 02/693031
	Facsimile No. 02/69303501
Teleprinter No.	
3. Further observations, if necessary:	
4. A copy of this notification has been sent to:	
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Lazar Joseph Panakal
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38



## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

Date of mailing (day/month/year) 06 June 2001 (06.06.01)	
International application No. PCT/IT00/00380	Applicant's or agent's file reference 21T015812WO7
International filing date (day/month/year) 27 September 2000 (27.09.00)	Priority date (day/month/year) 30 September 1999 (30.09.99)
Applicant LA GRECA, Marco et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

24 April 2001 (24.04.01)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>21T015812W07</b>	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/IT 00/ 00380</b>	International filing date (day/month/year) <b>27/09/2000</b>	(Earliest) Priority Date (day/month/year) <b>30/09/1999</b>
Applicant  <b>TECHINT COMPAGNIA TECNICA INTERNAZIONALE S.P.A.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT 00/00380

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C03C13/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	EP 1 048 625 A (POLIGLAS SA) 2 November 2000 (2000-11-02) claims; examples C1,C6; table 1 ---	1,2
A	WO 98 43923 A (JOHNS MANVILLE INT INC) 8 October 1998 (1998-10-08) claims; examples ---	1-15
A	EP 0 588 251 A (SCHULLER INT INC) 23 March 1994 (1994-03-23) claims; examples ---	1-15
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

22 January 2001

Date of mailing of the international search report

29/01/2001

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT 00/00380

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	POTTER R M ET AL: "GLASS FIBER DISSOLUTION IN A PHYSIOLOGICAL SALINE SOLUTION" GLASTECHNISCHE BERICHTE, DE, VERLAG DER DEUTSCHEN GLASTECHNISCHEN GESELLSCHAFT. FRANKFURT, vol. 64, no. 1, 1991, pages 16-28, XP000178832 table 2	1-15
P, A	FR 2 781 788 A (SAINT GOBAIN ISOVER) 4 February 2000 (2000-02-04) claims; examples	1-15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/00/00380

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1048625 A	02-11-2000	NONE	
WO 9843923 A	08-10-1998	US 5945360 A AU 6768898 A CA 2255626 A EP 0915812 A JP 2000511508 T	31-08-1999 22-10-1998 08-10-1998 19-05-1999 05-09-2000
EP 0588251 A	23-03-1994	US 5401693 A AT 151061 T CA 2106412 A,C DE 69309374 D DE 69309374 T DK 588251 T EP 0739862 A JP 2588360 B JP 6321578 A US 5981414 A	28-03-1995 15-04-1997 19-03-1994 07-05-1997 23-10-1997 29-09-1997 30-10-1996 05-03-1997 22-11-1994 09-11-1999
FR 2781788 A	04-02-2000	NONE	